APPENDIX A: PENDING CLAIMS
AS OF JULY 9, 2003

U.S. APPLICATION NO. 10/009,945; ATTORNEY DOCKET NO. 10624-092-999

37. A Smurf polypeptide comprising greater than 70% homology with an amino acid sequence depicted in SEQ ID NO:2.

38. The Smurf polypeptide of claim 37 comprising an amino acid sequence depicted in SEQ ID NO:2.

39. The Smurf polypeptide of claim 37 comprising greater than 90% homology with an amino acid sequence depicted in SEQ ID NO:2.

40. The Smurf polypeptide of claim 37 or 39 comprising a mutation corresponding to C710A.

41. A Smurf polypeptide comprising greater than 70% homology with an amino acid sequence depicted in SEQ ID NO:4.

42. The Smurf polypeptide of claim 41 comprising an amino acid sequence depicted in SEQ ID NO:4.

43. The Smurf polypeptide of claim 41 comprising greater than 90% homology with an amino acid sequence depicted in SEQ ID NO:4.

44. The Smurf polypeptide of claim 41 or 43 comprising a mutation corresponding to C716A.

45. A nucleic acid which encodes SEQ ID NO:2.

46. The nucleic acid of claim 45 comprising a nucleotide sequence depicted in SEQ ID NO:1.

47. A nucleic acid comprising at least about 70% homology with a nucleotide sequence depicted in SEQ ID NO:1.

48. The nucleic acid of claim 47 comprising at least about 80% homology with a nucleotide sequence depicted in SEQ ID NO:1.

49. The nucleic acid of claim 47 or 48 comprising a mutation corresponding to C710A.

50. An oligonucleotide or nucleic acid that specifically hybridizes to a nucleic acid which encodes SEQ ID NO:2 under highly stringent conditions.

51. An isolated nucleic acid which encodes SEQ ID NO:4.

52. The nucleic acid of claim 51 comprising a nucleotide sequence depicted in SEQ ID NO:3.

53. A nucleic acid comprising at least about 70% homology with a nucleotide sequence depicted in SEQ ID NO:3.

54. The nucleic acid of claim 53 comprising at least about 80% homology with a nucleotide sequence depicted in SEQ ID NO:3.

55. The nucleic acid of claim 53 or 54 comprising a mutation corresponding to C716A.

56. An oligonucleotide or nucleic acid that specifically hybridizes to a nucleic acid which encodes SEQ ID NO:4 under highly stringent conditions.

57. A vector comprising a nucleic acid which encodes SEQ ID NO:2.

58. A host cell comprising the vector of claim 57.

59. A vector comprising a nucleic acid which encodes SEQ ID NO:4.

60. A host cell comprising the vector of claim 59.

61. A method for producing an amino acid sequence depicted in SEQ ID NO:2 which comprises growing a host cell which expresses the amino acid sequence depicted in SEQ ID NO:2.

62. A method for producing an amino acid sequence depicted in SEQ ID NO:4 which comprises growing a host cell which expresses the amino acid sequence depicted in

SEQ ID NO:4.

63. A transgenic non-human animal which expresses an amino acid sequence depicted in SEQ ID NO:2.

64. A transgenic non-human animal which expresses an amino acid sequence depicted in SEQ ID NO:4.

65. A method for inhibiting a bone morphogenic protein or tumor growth factor-beta activation pathway in a cell which comprises expressing an isolated nucleic acid which encodes SEQ ID NO:2.

66. A method for promoting a bone morphogenic protein or tumor growth factor-beta activation pathway in a cell which comprises suppressing endogenous expression of an amino acid sequence depicted in SEQ ID NO:2.

67. A method for inhibiting a bone morphogenic protein or tumor growth factor-beta activation pathway in a cell which comprises expressing an isolated nucleic acid which encodes SEQ ID NO:4.

68. A method for promoting a bone morphogenic protein or tumor growth factor-beta activation pathway in a cell which comprises suppressing endogenous expression of an amino acid sequence depicted in SEQ ID NO:4.

69. A method of screening for a modulator of Smurf activity which comprises detecting modulation of Smurf activity in the presence of a test compound relative to Smurf activity in the absence of the test compound.

70. The method according to claim 69, wherein the Smurf activity is ubiquitination of a Smad polypeptide in a host cell.

71. The method according to claim 69, wherein the Smurf activity is interaction of a Smurf WW domain with a PPYX domain of a Smad polypeptide.

72. The method according to claim 71, wherein the test compound is screened for the ability to inhibit the interaction.

73. An antibody which specifically binds to an amino acid sequence depicted in SEQ ID NO:2.

74. An antibody which specifically binds to an amino acid sequence depicted in SEQ ID NO:4.